

CLAIMS

1. A portable computer system comprising:

a connection mechanism for coupling to a peripheral device;

5 a rechargeable power supply coupled to said connection mechanism; and

a charging control module coupled to said rechargeable power supply and
coupled to said connection mechanism, said charging control module including logic
for determining the operating time for said portable computer system and for
determining the operating time for said peripheral device, said charging control
10 module operable for charging one of a rechargeable power supply of said peripheral
device and said rechargeable power supply of said portable computer system so as to
control the operating time for said portable computer system and said peripheral
device.

15 2. The portable computer system of Claim 1 further comprising:

a charging circuit coupled to said power supply and coupled to said connection
mechanism, said charging circuit operable to charge said power supply when power is
supplied to said connection mechanism.

20 3. The portable computer system of Claim 1 further comprising:

a power supply circuit coupled to said power supply and coupled to said
connection mechanism, said power supply circuit electrically coupled to said charging
control module and operable in response to input from said charging control module

for coupling power from said rechargeable power supply to said connection mechanism for charging said peripheral device.

4. The portable computer system of Claim 3 wherein said connection

5 mechanism comprises a first pin for receiving power, said first pin coupling power to said charging circuit for charging said rechargeable power supply, and wherein said connection mechanism includes a second pin coupled to said power supply circuit for sending power to said peripheral device.

10 5. The portable computer system of Claim 3 wherein said portable computer system further comprises a user selection mechanism for receiving user input, said user selection mechanism including provision for allowing a user to select between maximizing operating time of said peripheral device, maximizing operating time of said portable computer system, and maximizing operating time of both said portable
15 computer system and said peripheral device.

6. A method for controlling the operating time of a portable computer system and a peripheral device that is coupled to said portable computer system, said method comprising:

20 determining the charge within a rechargeable power supply of said portable computer system;

determining the charge within a rechargeable power supply of said peripheral device;

determining the operating time for said portable computer system using said determined charge within said rechargeable power supply of said portable computer system;

determining the operating time for said peripheral device using said determined charge within said rechargeable power supply of said peripheral device; and

charging one of said rechargeable power supply of said peripheral device and said rechargeable power supply of said portable computer system so as to control the operating time for said portable computer system and said peripheral device.

7. The method of Claim 6 wherein said rechargeable power supply of said portable computer system is charged when said determined operating time for said peripheral device is greater than said determined operating time for said portable computer system.

8. The method of Claim 7 wherein said rechargeable power supply of said peripheral device is charged when said determined operating time for said portable computer system is greater than said determined operating time for said peripheral device.

9. The method of claim 6 further comprising:

providing a user selection mechanism for receiving user input, said user selection mechanism including provision for allowing a user to select between maximizing operating time of said peripheral device, maximizing operating time of said portable computer system, and maximizing operating time of both said portable computer system and said peripheral device.

10. The method of claim 6 further comprising:

when input is received indicating that operating time of said peripheral device is to be maximized, sending power from said rechargeable power supply of said portable computer system.

11. The method of claim 10 further comprising:

when input is received indicating that operating time of said portable computer system is to be maximized, instructing said peripheral device to send power to said portable computer system.

12. The method of claim 11 wherein charging one of said rechargeable power supply of said peripheral device and said rechargeable power supply of said portable computer system further comprises:

when input is received indicating that operating time of said portable computer system and said peripheral device are to be maximized, moving power such that the

operating time for said portable computer system is equal to the operating time of said peripheral device.

13. The method of Claim 12 wherein said portable computer system generates
5 a low-power warning when charge of either said portable computer device or said
peripheral device is low, generating a low-power warning and indicating options that
can be selected by a user, said selectable options including maximizing the operating
time of said portable computer system, maximizing the operating time of said
peripheral device, and maximizing operating time of both said portable computer
10 system and said peripheral device.

14. In a computer system including a processor coupled to a bus, and a
memory unit coupled to the bus for storing information, a computer-implemented
method for controlling the operating time of a portable computer system and a
15 peripheral device that is coupled to said portable computer system, said method
comprising:

determining the charge within a rechargeable power supply of said portable
computer system;

determining the charge within a rechargeable power supply of said peripheral
20 device;

determining the operating time for said portable computer system using said
determined charge within said rechargeable power supply of said portable computer
system;.

determining the operating time for said peripheral device using said determined charge within said rechargeable power supply of said peripheral device; and

charging one of said rechargeable power supply of said peripheral device and said rechargeable power supply of said portable computer system so as to control the operating time for said portable computer system and said peripheral device.

15. The method of Claim 14 wherein said rechargeable power supply of said portable computer system is charged when said determined operating time for said peripheral device is greater than said determined operating time for said portable computer system.

16. The method of Claim 15 wherein said rechargeable power supply of said peripheral device is charged when said determined operating time for said portable computer system is greater than said determined operating time for said peripheral device.

17. A peripheral device comprising:
a connection mechanism adapted to couple to a portable computer system;
a rechargeable power supply;
a boost circuit coupled to said rechargeable power supply and coupled to said connection mechanism, said boost circuit for increasing the voltage from said rechargeable power supply to a voltage sufficient to charge a rechargeable power

supply of a portable computer system when a portable computer system is coupled to said connection mechanism;

a boost charging circuit coupled to said rechargeable power supply and coupled to said connection mechanism, said boost charging circuit for increasing voltage received from a portable computer system to a voltage sufficient to charge said rechargeable power supply; and

a controller coupled to said connection mechanism for communicating with said portable computer system, said controller coupled to said boost charging circuit and coupled to said boost circuit, said controller operable upon receiving instructions from said portable computer system to cause said boost circuit to send power to said portable computer system.

18. The peripheral device of Claim 17 wherein said connection mechanism comprises a first connector receptacle for receiving a first pin, said first connector receptacle receiving power through said first pin and coupling said power to said boost charging circuit for charging said rechargeable power supply.

19. The peripheral device of Claim 18 wherein said connection mechanism comprises a second connector receptacle for receiving a second pin, said second connector receptacle sending power to said second pin for charging said portable computer system.

20. The peripheral device of Claim 19 wherein said controller is operable to determine the charge of said rechargeable power supply and wherein said controller communicates the charge of said rechargeable power supply to said portable computer system.

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21. The peripheral device of Claim 20 wherein said controller is operable to determine operating time and wherein said controller communicates said determined operating time to said portable computer system.

22. The peripheral device of Claim 20 further comprising a power-adaptor charging circuit that can be coupled to said rechargeable power supply for charging said rechargeable power supply.